

Claims:

Claim 1 (currently amended): Processing apparatus adapted to implement an artificial intelligence application, which application requires use of training sets having positive and negative examples, the apparatus comprising:

at least one memory adapted to store data and/or instructions; and

at least one processor ~~adapted~~ caused to execute operations, using the at least one memory, for recognizing and maintaining a set of positive examples for training; and

upon completion of recognition of the set of positive examples, for selecting a set of negative examples for training responsive to the set of positive examples, the set of negative examples having a same number of members as the set of positive examples.

Claim 2 (canceled)

Claim 3 (original): The apparatus of claim 1, wherein the artificial intelligence application is a content recommender.

Claim 4 (original): The apparatus of claim 3, wherein the content is television shows.

Claim 5 (currently amended): Processing apparatus adapted to implement an artificial intelligence application, which application requires use of training sets having positive

and negative examples, the apparatus comprising:

at least one memory adapted to store data and/or instructions; and

at least one processor ~~adapted~~ caused to execute operations, using the at least one memory, for recognizing and maintaining a set of positive examples for training; and

upon completion of recognition of the set of positive examples, for selecting a set of negative examples for training responsive to the set of positive examples, wherein the positive and negative examples are describable in accordance with at least one feature, the feature having a plurality of possible values within a feature space; the set of positive examples includes at least one subset, each subset including a respective plurality of members sharing a same respective value of a given feature in the feature space, the given feature being one that has been determined in advance to be a dominant feature in the feature space; and the set of negative examples includes at least one respective subset corresponding to the at least one subset of the set of positive examples, the members of each respective subset of negative examples being selected to share the same respective value of the given feature with the members of the subset of the set of positive examples that corresponds with the respective subset of negative examples.

Claim 6 (original): The apparatus of claim 5, wherein the set of negative examples includes at least one respective second subset of negative examples, the members of

the respective second subset of negative examples being selected to have a value of the given feature that lies within a predetermined range of the same value, but excluding the same respective value.

Claim 7 (original): The apparatus of claim 6, wherein no negative example appears twice in the set of negative examples.

Claim 8 (original): The apparatus of claim 5, wherein the given feature is time of day.

Claim 9 (original): The apparatus of claim 1, wherein the operations include training the artificial intelligence application responsive to the positive and negative examples; and executing the artificial intelligence application to yield a processing result in a useful application.

Claim 10 (currently amended): Apparatus adapted to implement an artificial intelligence application, which application requires use of training sets having positive and negative examples, the positive and negative examples being describable in accordance with at least one feature, the feature having a plurality of possible values within a feature space, the apparatus comprising:

at least one memory adapted to store data and/or instructions; and

at least one processor ~~adapted~~ caused to execute operations, using the at least

one memory, for recognizing and maintaining a set of positive examples for training, the set of positive examples including at least one subset, each subset including a respective plurality of members sharing a same respective value of a given feature in the feature space, the given feature being one that has been determined in advance to be a dominant feature in the feature space; and for selecting a set of negative examples for training, the set of negative examples including at least one respective subset corresponding to the at least one subset of the set of positive examples, the members of each respective subset of negative examples being selected to share the same respective value of the given feature with the members of the subset of the set of positive examples that corresponds with the respective subset of negative examples.

Claim 11 (original): The apparatus of claim 10, wherein the artificial intelligence application is a content recommender.

Claim 12 (original): The apparatus of claim 11, wherein the content is television shows.

Claim 13 (original): The apparatus of claim 10, wherein the set of negative examples includes at least one respective second subset of negative examples, the members of the respective second subset of negative examples being selected to have a value of the given feature that lies within a predetermined range of the same respective value, but excluding the same respective value.

Claim 14 (original): The apparatus of claim 10, wherein no negative example appears twice in the set of negative examples.

Claim 15 (original): The apparatus of claim 13, wherein the given feature is time of day.

Claim 16 (currently amended): Apparatus adapted to implement an artificial intelligence application, which application requires use of training sets having positive and negative examples, the positive and negative examples being describable in accordance with at least one feature, the feature having a plurality of possible values within a feature space, the apparatus comprising:

at least one memory adapted to store data and/or instructions; and

at least one processor ~~adapted~~ caused to execute operations, using the at least one memory, for recognizing and maintaining a set of positive examples for training, the set of positive examples including at least one subset, each subset including a plurality of members sharing a same respective value of a given feature in the feature space, the given feature being one that has been determined in advance to be a dominant feature in the feature space; and for selecting a set of negative examples for training, the set of negative examples includes at least one respective subset of negative examples, the members of the respective subset of negative examples being selected to have a value of the given feature that lies within a predetermined range of the same respective value,

but not including the same respective value.

Claim 17 (original): The apparatus of claim 16, wherein the artificial intelligence application is a content recommender.

Claim 18 (original): The apparatus of claim 17, wherein the content is television shows.

Claim 19 (original): The apparatus of claim 16, wherein no negative example appears twice in the set of negative examples.

Claim 20 (original): The apparatus of claim 16, wherein the given feature is time of day.

Claims 21-23 (Canceled)

Claim 24 (currently amended): Apparatus adapted to implement an artificial intelligence application, which application requires use of training sets having positive and negative examples, the positive and negative examples being describable in accordance with at least one feature, the feature having a plurality of possible values within a feature space, the apparatus comprising:

at least one memory adapted to store data and/or instructions; and

at least one processor ~~adapted~~ caused to execute operations, using the at least

one memory, for recognizing and maintaining a set of positive examples for training, the set of positive examples including at least one subset, each subset including a plurality of members sharing a same respective value of a given feature in the feature space, the given feature being one that has been determined in advance to be a dominant feature in the feature space; and for selecting a set of negative examples for training, the set of negative examples including at least one respective subset of negative examples, the members of the respective subset of negative examples being selected to have a value of the given feature that is approximately adjacent to same respective value.

Claim 25 (previously presented): The apparatus of claim 24, wherein the given feature is time of day, and adjacent means either within an hour before or within an hour after.

Claim 26 (previously presented): The apparatus of claim 24, wherein each respective subset of negative examples corresponds with a respective one of the at least one subset of positive examples, so that its respective value of the given feature is adjacent to the same respective value of the corresponding subset.

Claim 27 (previously presented): A method for selecting negative examples for use in an artificial intelligence application, the method comprising executing operations on at least one data processing device, the operations comprising:

selecting a set of positive examples that satisfy at least one desired external

criterion;

upon completion of the selecting of the positive examples and responsive thereto, selecting a set of negative examples; and

upon completion of selecting the positive examples, determining a particular value of a given feature in feature space, which particular value characterizes a significant subset of the positive examples, the selecting of the set of negative examples being such that a significant subset of the negative examples has a selected value responsive to the particular value of the given feature in feature space.

Claim 28 (previously presented): A method of training an artificial intelligence application, the method comprising executing operations in at least one data processing device, the operations comprising:

selecting negative examples in accordance with the method of claim 27; and
training the artificial intelligence application using the negative examples.

Claim 29 (canceled)

Claim 30 (previously presented): The method of claim 27, wherein the selected value is the same as the particular value.

Claim 31 (previously presented): The method of claim 27, wherein the selected value

lies in a selected range around the particular value in feature space, but is not the same as the particular value.

Claim 32 (previously presented): A method of training an artificial intelligence application, the method comprising executing operations in at least one data processing device, the operations comprising:

- selecting negative examples in accordance with the method of claim 27; and
- training the artificial intelligence application using the negative examples.

Claim 33 (previously presented): The method of claim 27, wherein the artificial intelligence application recommends content.

Claim 34 (previously presented): A medium readable by at least one data processing device and embodying code for causing the data processing device to execute operations, the operations comprising:

- selecting a set of positive examples that satisfy at least one desired external criterion;
- upon completion of selecting the positive examples and responsive thereto, selecting a set of negative examples; and
- upon completion of selecting the positive examples, determining a particular value of a given feature in feature space, which particular value characterizes a

significant subset of the positive examples, the selecting of the set of negative examples being such that a significant subset of the negative examples has a selected value responsive to the particular value of the given feature in feature space.

Claim 35 (canceled)

Claim 36 (previously presented): The method of claim 34, wherein the selected value is the same as the particular value.

Claim 37 (previously presented): The method of claim 34, wherein the selected value lies in a selected range around the particular value in feature space, but is not the same as the particular value.

Claim 38 (previously presented): The medium of claim 34, wherein the operations further comprise training an artificial intelligence application using the positive and negative examples.

Claim 39 (previously presented): The medium of claim 38, wherein the operations further comprise running the artificial intelligence application to give a solution to a real external problem.

Claim 40 (previously presented): The medium of claim 39, wherein the solution is a content recommendation.